

CLASSIFICATION:

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EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2000			
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-4					Surface and Shallow Water Mine Countermeasure/0603502N					
COST (\$ in Millions)		FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Total PE Cost		76.599	109.765	97.929	121.193	91.245	107.808	88.653	CONT.	CONT.
Remote Minehunting System/Q0260/Q2387		17.417	45.231	45.696	65.252	59.383	65.345	40.020	CONT.	CONT.
Integrated Combat Weapons System/Q1233		10.367	20.011	14.365	9.770	3.373	3.184	3.274	CONT.	CONT.
Shallow Water Mine Countermeasure/Q2131		28.112	15.298	11.730	22.171	11.270	28.010	34.413	CONT.	CONT.
Unmanned Underwater Vehicle/V2094		20.703	29.225	26.138	24.000	17.219	11.269	10.946	CONT.	CONT.
Quantity of RDT&E Articles										
A. Mission Description and Budget Item Justification: The program provides for developments to combat the threat of known and projected foreign mines against U.S. Naval and merchant shipping in harbors, channels, choke points, sea lines of communications and amphibious and other fleet operating areas. It develops: (1) organic remote minehunting capability for DDG-51 Class and other surface combatants; (2) the integration and improvement of systems and support for systems which will detect, localize and classify moored, bottom, and close-tethered mines for use in Mine Countermeasure (MCM) MCM-1 Class, Mine Hunter Coastal (MHC) MHC-51 Class, and other surface ships; (3) systems for neutralizing mines and light obstacles from shallow water, very shallow water, surf zones, and beach landing craft zones in support of amphibious operations; (4) near-term and long-term Unmanned Undersea Vehicle (UUV) systems for clandestine mine reconnaissance. Note: In accordance with 15 USC 638, \$2.162M in FY 2000 is reserved for the Small Business Innovation Research (SBIR) assessment.										
B. Program Change Summary:				FY 1999	FY 2000	FY 2001				
FY 2000 President's Budget:				73.491	82.465	89.610				
Appropriated Value:				73.491	107.465					
Adjustment to FY 1999 Appropriated Value/										
FY 2000 President's Budget:				3.108	27.300	8.319				
FY 2000/01 OSD/OMB Budget Submit:				76.599	109.765	97.929				
Funding: FY99: (+\$7.000) RMS Acceleration (Cong Add), (+\$.281) BTR Update, (-\$1.393) Midyear Review BTRs, (-\$1.175) SBIR, (-\$.948) Contract Advisory, (-\$.657) General Reductions; FY00: (+10.000) RMS Acceleration, (+\$15,000) ICWS Acceleration, (+\$2.300) LMRS Program Acceleration -UUV; FY01: (+\$6.430) Integrated Combat Weapons System, (+\$2.100) UUV Acceleration of LMRS, (+\$.456) NWCF Rate Adjustment, (+\$.217) Strategic Sourcing redistribution, (-.669) Inflation adjustment, (-.215) General Reductions.										
Schedule: RMS – RMS (V)4 MSII occurred in 1Q/00 and RMS (V)4 MSIII will occur in 2Q/05.										

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Exhibit R-2, RDT&E Budget Item Justification
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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2000			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4		PROGRAM ELEMENT NAME AND NUMBER Surface & Shallow Water MCM, 0603502N			PROJECT NAME AND NUMBER Remote Minehunting Systems/Q0260/Q2387					
COST (\$ in Millions)		FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Project Cost		17.417	45.231	45.696	65.252	59.383	65.345	40.020	CONT.	CONT.
RDT&E Articles Qty			2							
<p>A. Mission Description and Budget Item Justification: The Remote Minehunting System (RMS), AN/WLD-1(V), program develops a new remotely operated minehunting system for surface ships. This effort includes development and integration of a remote vehicle, mine-hunting sensors, mission command and control, and installation into the DDG-51 Class Flight IIA Baseline 7 and AN/SQQ-89(V)15 Undersea Warfare Combat System.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>1. (U) FY 1999 ACCOMPLISHMENTS</p> <ul style="list-style-type: none"> - (U) (\$ 4.500) Completed RMS vehicle builder's trials. - (U) (\$.525) Prepared documentation for Milestone II. - (U) (\$12.392) Completed System Requirements Review (SRR). Began System Design Review (SDR) efforts, software development, and DDG51 Flight IIA ship integration. <p>2. (U) FY 2000 PLAN</p> <ul style="list-style-type: none"> - (U) (\$ 3.510) Complete System Design Review (SDR) [This is a Pre MS II Activity] - (U) (\$27.605) Begin Critical Design and fabrication of Engineering Development Models (EDMs) including Preliminary Design Review (PDR). - (U) (\$ 4.603) Continue software development - (U) (\$ 9.503) Continue DDG51 Flight IIA ship integration - (U) (\$ 4.010) Begin critical item testing - (U) (-\$ 4.000) BTR from Q2131 										

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4			PROGRAM ELEMENT NAME AND NUMBER Surface & Shallow Water MCM, 0603502N			PROJECT NAME AND NUMBER Remote Minehunting Systems/Q0260/Q2387																									
<p>4. (U) FY 2001 PLAN</p> <ul style="list-style-type: none"> - (U) (\$24.013) Continue development and fabrication of Engineering Development Models (EDMs), and complete Critical Design Review (CDR). - (U) (\$ 4.433) Continue software development. - (U) (\$ 9.650) Continue DDG51 Flight IIA ship integration - (U) (\$ 7.600) Continue critical item testing <p>B. OTHER PROGRAM FUNDING SUMMARY</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 8%;">FY 1998</th> <th style="width: 8%;">FY 1999</th> <th style="width: 8%;">FY 2000</th> <th style="width: 8%;">FY 2001</th> <th style="width: 8%;">FY 2002</th> <th style="width: 8%;">FY 2003</th> <th style="width: 8%;">FY 2004</th> <th style="width: 8%;">FY 2005</th> <th style="width: 8%;">TO COMPLETE</th> <th style="width: 8%;">TOTAL COST</th> </tr> </thead> <tbody> <tr> <td>(U) OPN RMS Line 262200</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">36.279</td> <td style="text-align: center;">CONT.</td> <td style="text-align: center;">CONT.</td> </tr> </tbody> </table> <p>C. Acquisition Strategy: The government has issued a series of contract modifications to Lockheed Martin to complete efforts through the System Design Review. Based upon the approved Milestone II decision the program office issued the contract modification to complete the Critical Design Review (CDR); upon completion of CDR a firm fixed price sole source contract to Lockheed Martin to complete the development, fabrication, and testing of the engineering development models, initial pilot line/tooling, and timed phased procurement of initial systems to meet ship delivery schedules. The government has worked with the contractor in an IPT environment to refine the specification and Statement of Work for the overall development effort. The IPT pricing process was used to generate the cost estimates against Navy requirements. The government will pursue commonality between the AN/ AQS-20X airborne minehunting system and the AN/WLD-1(V)1. The AN/WLD-1(V)1 contract plan is for the development of two (2) EDMs, system interactive electronic technical manual (IETM), provisioning data, technical drawings and data, and engineering services.</p> <p>D. Schedule Profile: See Attached</p>											FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TO COMPLETE	TOTAL COST	(U) OPN RMS Line 262200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36.279	CONT.	CONT.
	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TO COMPLETE	TOTAL COST																					
(U) OPN RMS Line 262200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36.279	CONT.	CONT.																					

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Exhibit R-2a, RDT&E Project Justification
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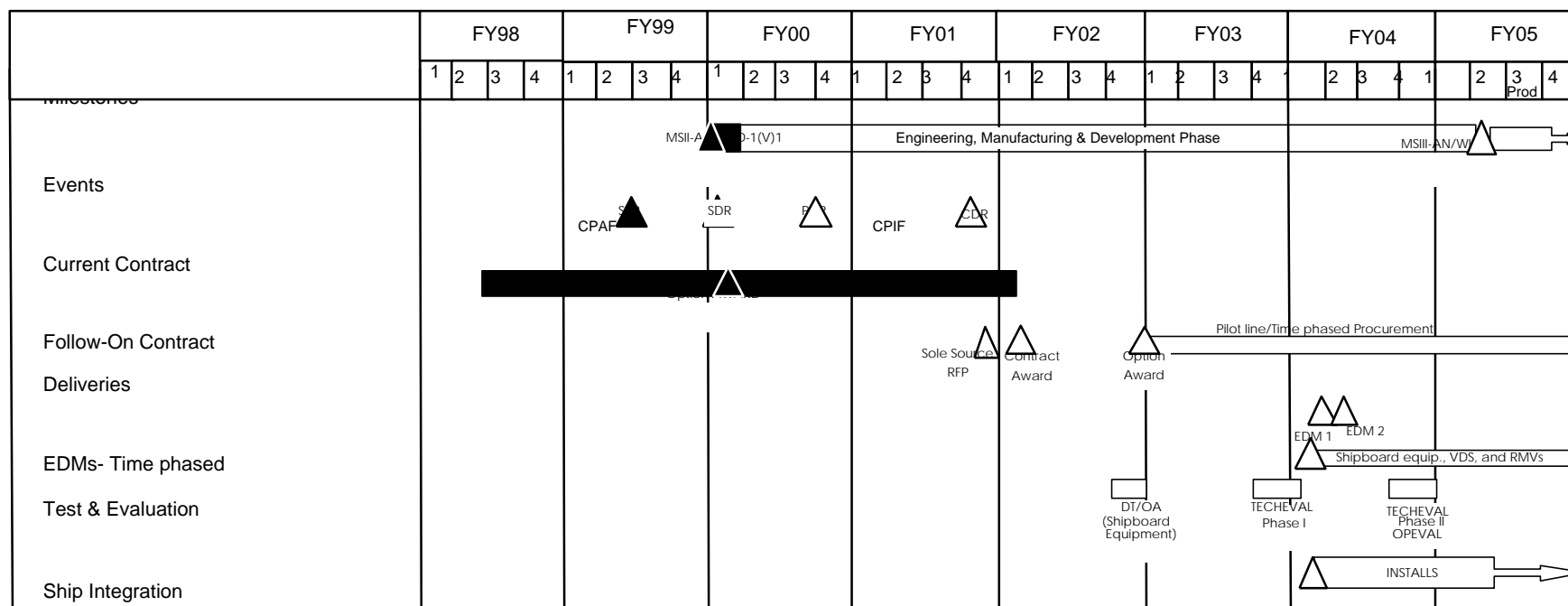
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AN/WLD-1(V)1 PROGRAM SCHEDULE



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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2000				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDTE, N , BA-4			Surface & Shallow Water MCM, 0603502N			Remote Minehunting System/Q0260/Q2387						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Various	Various	107.700	5.257	N/A	20.585	12/99	13.653	11/00	CONT.	CONT.	N/A
Ancillary Hardware Development												
Systems Engineering												
Licenses												
Tooling												
GFE												
Award Fees			4.800		N/A		N/A		N/A	0.000	4.800	N/A
Subtotal Product Development			112.500	5.257		20.585		13.653				
Remarks:												
Development Support Equipment		TBD									0.000	
Software Development	C/CPFF/IF	Lockheed Martin	2.300	0.400		3.702		3.833		CONT.	CONT.	
Software Development	WR	NSWC, CSS		0.200	N/A	0.901	N/A	0.600	N/A	CONT.	CONT.	N/A
ILS	C/CPFF/IF	Lockheed Martin		0.500		2.800		4.100		CONT.	CONT.	
ILS	WR	NSWC, CSS		1.400	N/A	0.200	N/A	0.200	N/A	CONT.	CONT.	N/A
Ship Integration	C/CPFF	Lockheed Martin						1.500		CONT.	CONT.	
Ship Integration	Various	Various		2.000		9.503		8.150		CONT.	CONT.	
Subtotal Support			2.300	4.500		17.106		18.383		CONT.	CONT.	
Remarks:												

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Exhibit R-3, Project Cost Analysis
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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2000				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDTE&E, N , BA-4			Surface & Shallow Water MCM, 0603502N			Remote Minehunting Systems/ Q0260/Q2387						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Various	15.370		N/A	4.010	N/A	7.600	N/A	CONT.	CONT.	N/A
Operational Test & Evaluation												
Tooling												
GFE												
Subtotal T&E			15.370	0.000		4.010		7.600		CONT.	CONT.	
Remarks:												
Contractor Engineering Support	C/CPFF/IF	Lockheed Martin		4.500		4.570		3.700		CONT.	CONT.	
Government Engineering Support	Various	Various	32.600	2.000	N/A	1.500	N/A	0.600	N/A	CONT.	CONT.	N/A
Program Management Support	Various	Various		1.100	N/A	1.400	N/A	1.700	N/A	CONT.	CONT.	N/A
Travel	Various	NAVSEA		0.060	N/A	0.060	N/A	0.060	N/A	CONT.	CONT.	N/A
Labor (Research Personnel)												
Overhead												
Subtotal Management			32.600	7.660		7.530		6.060		CONT.	CONT.	
Remarks:												
Total Cost			162.770	17.417		49.231		45.696				
Remarks: FY 00 requirement is \$49.231M. This requirement is met with \$45.231M control and BTR of \$4.000M.												

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4		PROGRAM ELEMENT NAME AND NUMBER Surface & Shallow Water MCM, 0603502N			PROJECT NAME AND NUMBER Integrated Combat Weapons System/Q1233/Q2388						
COST (\$ in Millions)			FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Project Cost			10.367	20.011	14.365	9.770	3.373	3.184	3.274	CONT.	CONT.
RDT&E Articles Qty											
<p>Mission Description and Budget Item Justification: (1) Closed Loop Degaussing (CLDG) to improve survivability; (2) ICWS is a series of major, incremental block upgrades to the current combat systems. It provides the MCM/MHC Class Ships an affordable and fully integrated combat weapons system which will improve mission execution efficiency, dramatically reduce life-cycle costs, and facilitate changes to meet future mission requirements. (3) Mine Warfare and Environmental Decision Aids Library (MEDAL) is a software segment on the Global Command and Control System – Maritime (GCCS-M). MEDAL provides mine and warfare planning and evaluation tools and databases to the MCM Commander. (4) Organic MCM C4I connectivity to the rest of the fleet is provided through GCCS-M. Design and implement MIW C4I Surveillance and Reconnaissance (C4ISR) architecture to fully integrate and optimize organic and dedicated systems within the Navy's C4ISR architecture.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p>											

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2000
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4	PROGRAM ELEMENT NAME AND NUMBER Surface & Shallow Water MCM, 0603502N	PROJECT NAME AND NUMBER Integrated Combat Weapons System/Q1233/Q2388
<p>2. (U) FY 1999 ACCOMPLISHMENTS</p> <p>(U) CLDG</p> <ul style="list-style-type: none">- (U) (\$1.592) Completed OPEVAL. TECHEVAL and OPEVAL were extended to accommodate ship schedule and ascertain whether range frequency threshold and goal have been met.- (U) (\$.100) Completed all documentation required for MSIII.- (U) (\$.103) Conducted MSIII review. <p>(U) ICWS</p> <ul style="list-style-type: none">- (U) (\$.590) Completed integration of unique SQQ-32 trainer functionality into SSQ-94 trainer.- (U) (\$.170) Developed in-depth MNV signature knowledge and began development of silencing modifications.- (U) (\$.250) Completed tasks associated with SLQ-48 obsolescence issues to reduce life-cycle costs.- (U) (\$3.418) Began software design/code/test for ICWS. <p>(U) MEDAL</p> <ul style="list-style-type: none">- (U) (\$1.639) Completed Build 7 software development, documentation, and Integration.- (U) (\$.350) Completed Build 7 test and evaluation.- (U) (\$.790) Began development of Build 8 Core capabilities, tactical algorithms and software upgrades.- (U) (\$.250) Began Build 8 platform conversion.- (U) (\$.315) Continued Systems Engineering. <p>(U) MCS/MCM Ship Studies</p> <ul style="list-style-type: none">- (U) (\$.500) Initiated study of alternatives to replace or retain MCS-12 (USS INCHON) as the only fleet mine countermeasure support ship.- (U) (\$.300) Initiated study of alternatives for follow-on class of surface mine countermeasures ships.		

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EXHIBIT R-2a, RDT&E Project Justification		DATE:
APPROPRIATION/BUDGET ACTIVITY		February 2000
RDT&E, N/BA-4	PROGRAM ELEMENT NAME AND NUMBER	PROJECT NAME AND NUMBER
	Surface & Shallow Water MCM, 0603502N	Integrated Combat Weapons System/Q1233/Q2388
<p>3. (U) FY 2000 PLAN</p> <p>(U) ICWS</p> <ul style="list-style-type: none">- (U) (\$6.000) Initiate hardware design, integration, and testing.- (U) (\$8.000) Initiate software design/code/test for ICWS.- (U) (\$1.000) Develop Life Cycle Support plan. <p>(U) MEDAL</p> <ul style="list-style-type: none">- (U) (\$.300) Conduct build 8 test and evaluation.- (U) (\$1.045) Begin Build 9 development- (U) (\$.166) Define Build 10 core capabilities definition. <p>(U) ORGANIC MCM C4I</p> <ul style="list-style-type: none">- (U) (\$1.700) Develop MIW C4ISR data requirements for data fusion, file format, structure and transmission requirements for (organic/dedicated) MIW systems.- (U) (\$1.800) Develop and conduct MOD/SIM to optimize organic and dedicated systems. <p>4. (U) FY 2001 PLAN</p> <p>(U) ICWS</p> <ul style="list-style-type: none">- (U) (\$2.000) Continue hardware design, integration, and testing.- (U) (\$3.500) Continue software design/code/test for ICWS.- (U) (\$1.038) Develop ILS update. <p>(U) MEDAL</p> <ul style="list-style-type: none">- (U) (\$.260) Conduct Build 9 test and evaluation.- (U) (\$2.413) Begin Build 10 development, and begin testing.- (U) (\$.200) Continue Systems Engineering.- (U) (\$.654) Define Build 11 core capabilities and begin algorithm development.		

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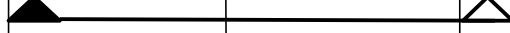






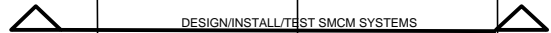
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APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NAME AND NUMBER			PROJECT NAME AND NUMBER																																		
RDT&E, N/BA-4		Surface & Shallow Water MCM, 0603502N			Integrated Combat Weapons System/Q1233/Q2388																																		
<p>4. (U) FY 2001 PLAN (cont'd) (U) ORGANIC MCM C4I - (U) (\$1.000) Complete MIW C4I architecture/data requirements development. - (U) (\$1.000) Continue MOD/SIM effort. - (U) (\$1.500) Support MIW systems in implementation of MIW C4ISR architecture.</p> <p>(U) MCS/MCM Ship Studies - (U) (\$) .500 Complete study of alternatives to replace or retain MCS-12 (USS INCHON). - (U) (\$) .300 Complete study of alternatives for follow-on class of surface mine countermeasures ships.</p> <p>B. OTHER PROGRAM FUNDING SUMMARY</p> <table><thead><tr><th></th><th><u>FY 1999</u></th><th><u>FY 2000</u></th><th><u>FY 2001</u></th><th><u>FY 2002</u></th><th><u>FY 2003</u></th><th><u>FY 2004</u></th><th><u>FY 2005</u></th><th>To Complete</th><th>Total Cost</th></tr></thead><tbody><tr><td>(U) OPN (CLDG) Line 262200</td><td>0.204</td><td>5.764</td><td>2.890</td><td>5.381</td><td>3.300</td><td>3.401</td><td>3.479</td><td>CONT.</td><td>CONT.</td></tr><tr><td>(U) OPN (ICWS) Line 262200</td><td>12.561</td><td>10.399</td><td>5.528</td><td>6.753</td><td>7.949</td><td>8.222</td><td>8.616</td><td>CONT.</td><td>CONT.</td></tr></tbody></table> <p>C. ACQUISITION STRATEGY</p> <p>ICWS is a series of major incremental upgrades to the current systems. The original equipment manufacturers have teamed to develop the changes. FY 98 and FY 99 tasks were accomplished under existing BOAs. MEDAL is an evolutionary program with a development cycle of one year per software build.</p> <p>D. SCHEDULE PROFILE</p> <p>See attached</p>											<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To Complete	Total Cost	(U) OPN (CLDG) Line 262200	0.204	5.764	2.890	5.381	3.300	3.401	3.479	CONT.	CONT.	(U) OPN (ICWS) Line 262200	12.561	10.399	5.528	6.753	7.949	8.222	8.616	CONT.	CONT.
	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To Complete	Total Cost																														
(U) OPN (CLDG) Line 262200	0.204	5.764	2.890	5.381	3.300	3.401	3.479	CONT.	CONT.																														
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RDT&E, N/BA-4		Surface & Shallow Water MCM, 0603502N		Integrated Combat Weapons System/Q1233/Q2388		
MIW C4I						
	FY00	FY01	FY02	FY03	FY04	FY05
Document MCM System Sensor Data Characteristics		DATA REQUIREMENTS FOR DATA FUSION, FILE FORMAT, STRUCTURE AND TRANSMISSION REQUIREMENTS FOR (ORGANIC/DEDICATED) MIW SYSTEMS				
Assess With NAVO/ID Specific Data Characteristics			DEVELOP AND CONDUCT MOD/SIM TO OPTIMIZE ORGANIC AND DEDICATED SYSTEMS			
				COMPLETE MIW INFO SYSTEM ENGINEERING REPORT		
				SELECT SYSTEM DATA STANDARDS		
				EVALUATE IMPLEMENTATION STRATEGY/REC'D COA		
Evaluate Ability of MIW C4ISR Architecture in GCCS-M/IT-21 Environment				SUPPORT MIW SYSTEMS IN IMPLEMENTATION OF MIW C4ISR ARCHITECTURE		
			DESIGN/INSTALL/TEST AMCM SYSTEMS			
			COMPLETE MIW C4I ARCHITECTURE/DATA REQUIREMENTS DEVELOPMENT			
				DESIGN/INSTALL/TEST SMCM SYSTEMS		

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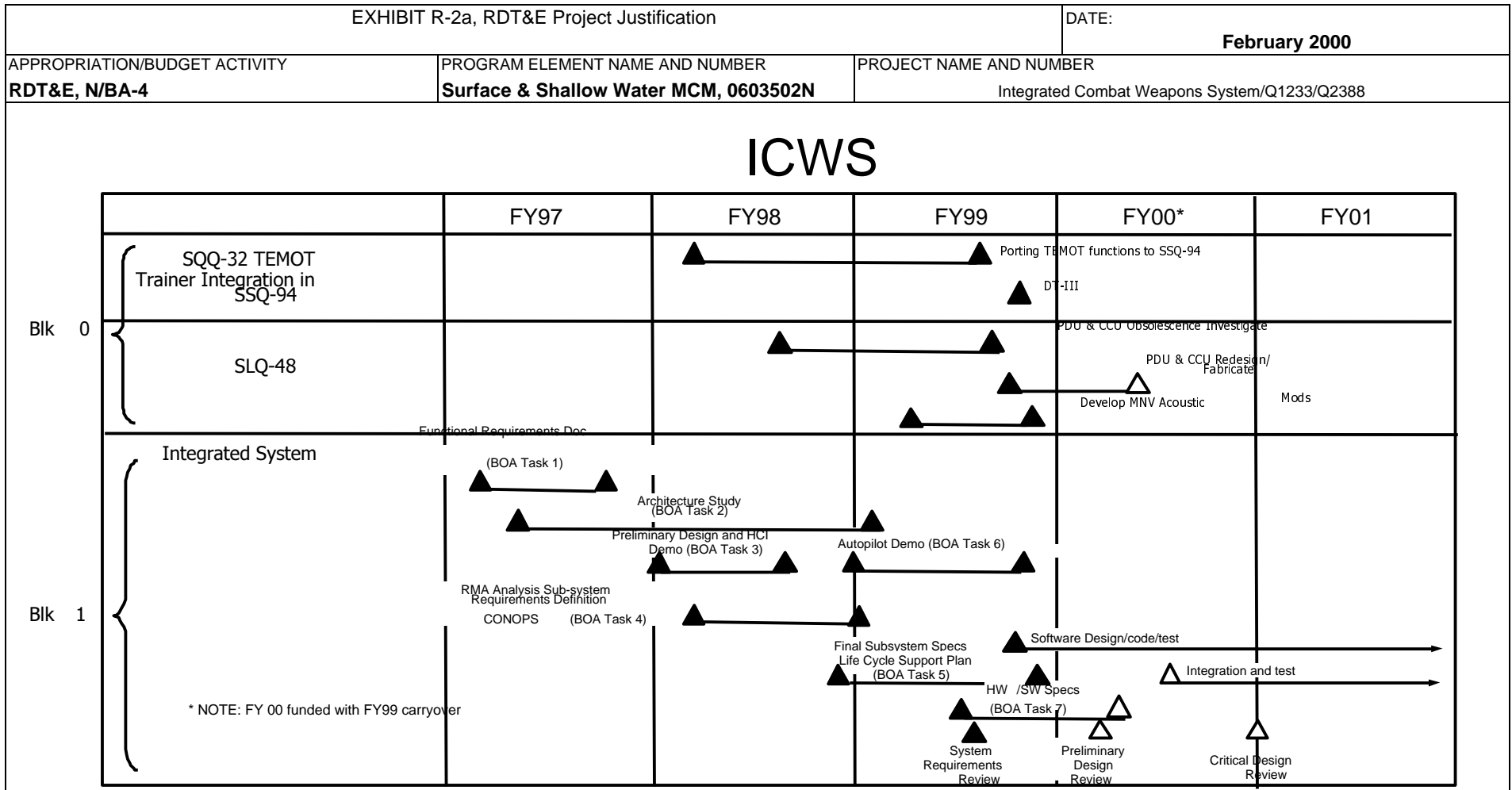
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MEDAL					
	FY97	FY98	FY99	FY00	FY01
Development of MEDAL with increased capabilities	Build 5 ←▲				
	▲	Build 6 ▲			
		Build 7 ▲			
			Build 8 ▲		
				Build 9 △	
				Build 10 △	
					Build 11 △→

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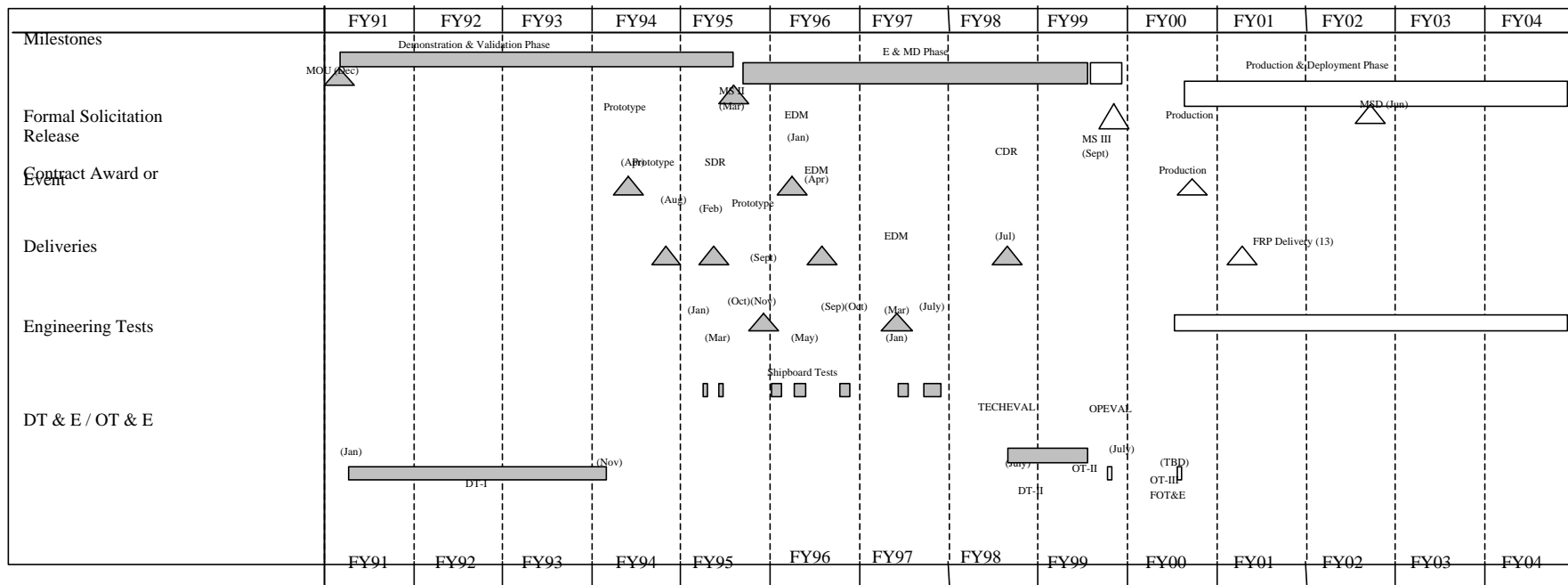
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CLDG



NOTES:

CDR	- Critical Design Review
DT	- Developmental Testing
DT & E	- Developmental Testing & Evaluation
E&MD	- Engineering & Manufacturing Development
EDM	- Engineering Development Model
FRP	- Full Rate Production
MOU	- Memorandum of Understanding

MSD - Material Support Date
OT - Operational Testing
OT&E - Operational Testing & Evaluation
SDR - System Design Review
TBD - To be determined

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2000				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N/BA-4			Surface & Shallow Water MCM/0603502N			Integrated Combat Weapons System/Q1233/Q2388						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	CPAF	Raytheon		0.760	11/98	6.000	04/00	2.000	11/00	CONT.	CONT.	N/A
Ancillary Hardware Development												
Systems Engineering	Various	NSWC, CD/NRAD, SD	0.100	1.115	11/98	1.700	11/99	2.000	11/00	CONT.	CONT.	N/A
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.100	1.875		7.700		4.000		CONT.	CONT.	
Remarks:												
Development Support Equipment											0.000	
Software Development	Various	NSWC, CSS	0.300	5.507	11/98	10.900	04/00	7.062	11/00	CONT.	CONT.	N/A
Training Development	Various	NSWC, CD		0.000	N/A	0.000		0.000		CONT.	CONT.	
Integrated Logistics Support	CPAF	Raytheon, RI		0.250		1.000		1.038		CONT.	CONT.	
Configuration Management	Various	Various		0.000	N/A	0.000		0.000		CONT.	CONT.	
Technical Data	Various	Various		0.100	N/A					CONT.	CONT.	
GFE												
Subtotal Support			0.300	5.857		11.900		8.100		CONT.	CONT.	
Remarks:												

R-1 SHOPPING LIST - Item No. 35

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 15 of 31)

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2000				
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N/BA-4			PROGRAM ELEMENT Surface & Shallow Water MCM/0603502N			PROJECT NAME AND NUMBER Integrated Combat Weapons System/Q1233/Q2388						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	CPFF	SAIC, VA	0.200	0.000	11/98	0.000	11/99	0.000	11/00	Cont.	0.200	N/A
Operational Test & Evaluation	WR	NSWC, CD		1.592	N/A						1.592	
Tooling											0.000	
GFE											0.000	
Subtotal T&E			0.200	1.592		0.000		0.000		0.000	1.792	
Remarks:												
Contractor Engineering Support	WR	NSWC, CD/CSS		0.153	N/A	0.100		1.298			1.551	
Government Engineering Support	WR	NSWC, CSS		0.500	N/A	0.200					0.700	
Program Management Support	WR	NSWC, CSS/NUWC		0.290	N/A	0.111	N/A	0.967	N/A	Cont.	1.368	N/A
Travel				0.100							0.100	
Labor (Research Personnel)											0.000	
Overhead											0.000	
Subtotal Management			0.000	1.043		0.411		2.265		0.000	3.719	
Remarks:												
Total Cost			0.600	10.367		20.011		14.365				
Remarks:												

R-1 SHOPPING LIST - Item No. 35

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 16 of 31)

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2000			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4		PROGRAM ELEMENT NAME AND NUMBER Surface & Shallow Water MCM, 0603502N			PROJECT NAME AND NUMBER Assault Breaching Systems/Q2131					
COST (\$ in Millions)		FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Project Cost		28.112	15.298	11.730	22.171	11.270	28.010	34.413	CONT.	CONT.
RDT&E Articles Qty										
A. Mission Description and Budget Item Justification: This program provides for a combination of joint US Marine Corps and US Navy projects planned to counter the threat to amphibious landing forces from known and projected foreign land and sea mines and light obstacles in the shallow water, very shallow water and surf zone approaches to amphibious assault areas. It develops systems for mine sweeping and explosive mine clearance. Included are the Distributed Explosives Technology (DET), Shallow Water Assault Breach System (SABRE) and follow-on P3I efforts.										
(U) PROGRAM ACCOMPLISHMENTS AND PLANS:										

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2000
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4	PROGRAM ELEMENT NAME AND NUMBER Surface & Shallow Water MCM, 0603502N	PROJECT NAME AND NUMBER Assault Breaching Systems/Q2131
<p>1. (U) FY 1999 ACCOMPLISHMENTS</p> <p>(U) DET</p> <ul style="list-style-type: none">- (U) (\$2.338) Completed DT-II.- (U) (\$1.500) Completed safety testing.- (U) (\$1.249) Completed system procurement preparation.- (U) (\$1.938) Conducted OT-II.- (U) (\$.262) Preparation for MSIII. <p>(U) SABRE</p> <ul style="list-style-type: none">- (U) (\$1.050) Continued safety testing.- (U) (\$.431) Continued DT-II- (U) (\$.375) Continued system procurement preparation.- (U) (\$1.475) Continued OT-II- (U) (\$.262) Began MSIII preparation. <p>(U) EN</p> <ul style="list-style-type: none">- (U) (\$6.004) Began Extended Range DET Rocket development- (U) (\$5.158) Began Fire Control System (FCS) development.- (U) (\$5.821) Began SABRE Fuze upgrade.- (U) (\$.190) Completed Autonomous controller development.- (U) (\$.059) Portion of extramural program is reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.		

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Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 18 of 31)

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EXHIBIT R-2a, RDT&E Project Justification		DATE:
APPROPRIATION/BUDGET ACTIVITY		February 2000
RDT&E, N/BA-4	PROGRAM ELEMENT NAME AND NUMBER Surface & Shallow Water MCM, 0603502N	PROJECT NAME AND NUMBER Assault Breaching Systems/Q2131
<p>2. (U) FY 2000 PLAN</p> <p>(U) SABRE</p> <ul style="list-style-type: none">- (U) (\$2.712) Complete fabrication of DT/OT-II systems.- (U) (\$.385) Complete DT-II- (U) (\$.264) Complete system procurement preparation.- (U) (\$.650) Complete OT-II.- (U) (\$.465) Complete safety testing.- (U) (\$.178) MSIII . <p>(U) EN</p> <ul style="list-style-type: none">- (U) (\$2.184) Continue Extended Range DET Rocket development and engineering tests.- (U) (\$1.815) Continue FCS development and engineering tests.- (U) (\$2.645) Complete SABRE Fuze upgrade.- (U) (\$4.000) BTR to Q0260. <p>3. (4) FY 2001 PLAN</p> <p>U) EN</p> <ul style="list-style-type: none">- (U) (\$6.703) Continue SZA P3I development and engineering tests.- (U) (\$5.027) Continue FCS development and engineering tests.		

R-1 SHOPPING LIST - Item No. 35

Exhibit R-2a, RDT&E Project Justification
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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2000		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NAME AND NUMBER			PROJECT NAME AND NUMBER					
RDT&E, N/BA-4		Surface & Shallow Water MCM, 0603502N			Assault Breaching Systems/Q2131					
B. OTHER PROGRAM FUNDING SUMMARY										
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>TO COMPLETE</u>	<u>TOTAL COST</u>
(U) OPN (SWMCM Line 262400	0.000	7.256	18.708	16.863	37.863	19.769	7.696	8.485	CONT.	CONT.
C. Acquisition Strategy: Complete development of DET, SABRE and the Auto Pilot task of EN and transition to production. Improve the capabilities of DET and SABRE by developing the Surf Zone Array (SZA), and the Fire Control System (FCS) tasks of EN.										
D. Schedule Profile										
See attached										

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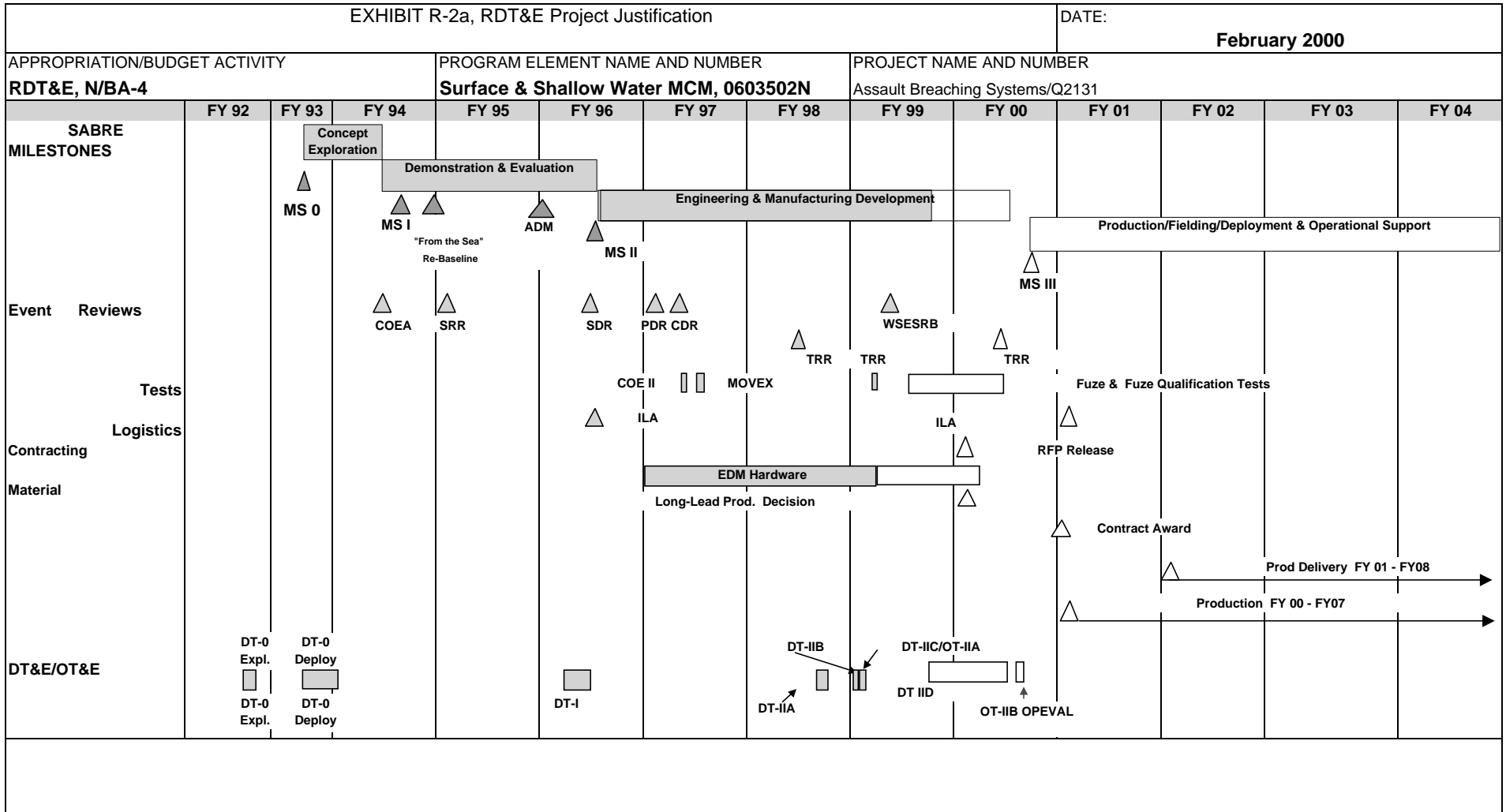
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Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 21 of 31)

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Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 22 of 31)

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EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2000																																																																																												
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NAME AND NUMBER			PROJECT NAME AND NUMBER																																																																																													
RDT&E, N/BA-4		Surface & Shallow Water MCM, 0603502N			Assault Breaching Systems/Q2131																																																																																													
<table><tr><th>FY 97</th><th>FY 98</th><th>FY 99</th><th>FY 00</th><th>FY 01</th><th>FY 02</th><th>FY 03</th><th>FY 04</th><th>FY 05</th></tr><tr><td colspan="2">SZ MID TERM (Explosive Neutralization (EN))</td><td colspan="7">Mid-term P3I Development</td></tr><tr><td colspan="2"> </td><td colspan="2">SABRE Fuze Upgrade</td><td colspan="2" rowspan="3"></td><td colspan="2">P3I Acquisition Decision</td><td>△</td></tr><tr><td colspan="2">Extended Range DET Rocket</td><td colspan="7">Rocket Motor Design Development & Test</td></tr><tr><td colspan="2">FCS for DET & SABRE</td><td colspan="7">Fire Control Design Development & Test</td></tr><tr><td colspan="2">SZ FAR TERM</td><td colspan="2"></td><td colspan="2">SZ AOA</td><td colspan="3">SZ System Design (Acq New Start)</td></tr><tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td><td>MS I</td><td colspan="2"></td></tr><tr><td colspan="2">BEACH ZONE FAR TERM</td><td colspan="3">Hydra-7 Concept Development (1)</td><td colspan="4">BZ System Design (Acq New Start)</td></tr><tr><td colspan="2">EN ATD BZA Development (1)</td><td colspan="2"></td><td colspan="2">BZ AOA</td><td>MS I</td><td colspan="2"></td></tr><tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td><td colspan="3"></td></tr></table>									FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05	SZ MID TERM (Explosive Neutralization (EN))		Mid-term P3I Development									SABRE Fuze Upgrade				P3I Acquisition Decision		△	Extended Range DET Rocket		Rocket Motor Design Development & Test							FCS for DET & SABRE		Fire Control Design Development & Test							SZ FAR TERM				SZ AOA		SZ System Design (Acq New Start)									MS I			BEACH ZONE FAR TERM		Hydra-7 Concept Development (1)			BZ System Design (Acq New Start)				EN ATD BZA Development (1)				BZ AOA		MS I											
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(1) These tasks are funded by ONR.																																																																																																		

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Exhibit R-3 Cost Analysis (page 1)							DATE: February 2000					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N/BA-4			Surface & Shallow Water MCM/0603502N			Assault Breaching Systems/Q2131						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	IH, CSS, TBD	40.200	8.900	N/A	2.300	N/A	4.800	N/A	CONT.	CONT.	N/A
Ancillary Hardware Development	WR	IH, CSS, TBD	7.100	1.000	N/A	0.500	N/A	0.650	N/A	CONT.	CONT.	N/A
Systems Engineering	WR	IH, CSS	13.000	2.000	N/A	0.500	N/A	0.300	N/A	CONT.	CONT.	N/A
Licenses	WR	N/A	0.800	0.000		0.000		0.000		0.000	0.800	
Tooling	WR	IH, CSS, TBD	0.800	0.060	N/A	0.200	N/A	0.050	N/A	CONT.	CONT.	N/A
GFE	WR	IH, CSS	2.600	0.500	N/A	1.400	N/A	0.200	N/A	CONT.	CONT.	N/A
Award Fees	N/A	N/A	0.500	0.000		0.000		0.000		0.000	0.500	
Subtotal Product Development			65.000	12.460		4.900		6.000		0.000	88.360	
Remarks: This is a combination of DET, SABRE and EN P3I work for FY99. There is more than one performing activity for most cost categories. Award dates are N/A because tasks are performed by government activities.												
Development Support Equipment	WR	IH, CSS, TBD	9.500	2.221	N/A	1.000	N/A	0.900	N/A	CONT.	CONT.	N/A
Software Development	WR	CSS	5.000	3.037	N/A	1.300	N/A	0.300	N/A	CONT.	CONT.	N/A
Training Development	WR	IH, CSS	1.500	0.500	N/A	0.300	N/A	0.300	N/A	CONT.	CONT.	N/A
Integrated Logistics Support	WR	IH, CSS	1.500	0.600	N/A	0.200	N/A	0.200	N/A	CONT.	CONT.	N/A
Configuration Management	WR	IH, CSS	1.500	1.900	N/A	0.300	N/A	0.100	N/A	CONT.	CONT.	N/A
Technical Data	WR	IH, CSS	0.800	1.500	N/A	1.100	N/A	0.300	N/A	CONT.	CONT.	N/A
GFE	WR	IH, CSS	0.200	0.200	N/A	0.100	N/A	0.000		0.000	0.500	N/A
Subtotal Support			20.000	9.958		4.300		2.100		CONT.	CONT.	
Remarks: NOTE: Award dates are N/A because tasks are performed by government activities.												

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Exhibit R-3, Project Cost Analysis
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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2000				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDTE, N/BA-4			Surface & Shallow Water MCM/0603502N			Assault Breaching Systems/Q2131						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	IH, CSS, TBD	19.500	1.400	N/A	0.850	N/A	2.000	N/A	CONT.	CONT.	N/A
Operational Test & Evaluation	WR	IH, CSS, TBD	7.000	1.000	N/A	0.100	N/A	0.000	N/A	CONT.	CONT.	N/A
Tooling	WR	IH, CSS, TBD	0.500	0.200	N/A	0.100	N/A	0.200	N/A	CONT.	CONT.	N/A
GFE	WR	IH, CSS, TBD	0.300	0.100	N/A	0.050	N/A	0.100	N/A	CONT.	CONT.	N/A
Subtotal T&E			27.300	2.700		1.100		2.300		CONT.	CONT.	
Remarks: NOTE: Award dates are N/A because tasks are performed by government activities.												
Contractor Engineering Support	WR	IH, CSS, TBD	2.000	0.200	N/A	0.100	N/A	0.100	N/A	CONT.	CONT.	N/A
Government Engineering Support	WR	IH, CSS	5.000	1.000	N/A	0.200	N/A	0.300	N/A	CONT.	CONT.	N/A
Program Management Support	WR	IH, CSS, NAVSEA	7.200	1.694	N/A	0.598	N/A	0.830	N/A	CONT.	CONT.	N/A
Travel	WR	NAVSEA	0.600	0.100	N/A	0.100	N/A	0.100	N/A	CONT.	CONT.	N/A
Labor (Research Personnel)	N/A	N/A									0.000	
Overhead	N/A	N/A									0.000	
Subtotal Management			14.800	2.994		0.998		1.330		CONT.	CONT.	
Remarks:												
Total Cost			127.100	28.112		11.298		11.730				
Remarks: FY 00 requirement is \$11.298M. This requirement is met with \$15.298M control and BTR of -\$4.000M.												

R-1 SHOPPING LIST - Item No. 35

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 25 of 31)

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EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2000			
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-4					Surface and Shallow Water Mine Countermeasures Program Element (PE) 0603502N					
COST (\$ in Millions)		FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Total PE Cost		20.703	29.225	26.138	24.000	17.219	11.269	10.946	CONT.	CONT.
										CONT.
Project Cost (V2094)		20.703	29.225	26.138	24.000	17.219	11.269	10.946	CONT.	CONT.
Quantity of RDT&E Articles		1 - NMRS				1 - LMRS				
<p>A. Mission Description and Budget Item Justification:</p> <p>This project was completely restructured in FY 1994 in response to Congressional direction provided in the FY 1994 DOD Appropriations Act. Specifically, the office of the Secretary of Defense and the Navy were directed to (1) establish priorities among various proposed UUV programs, (2) focus on near-term mine countermeasures issues, and (3) establish affordable, cost-effective programs. The Navy developed an overall UUV Program Plan, which was approved by ASN(RD&A) June 1994, endorsed by USD(A&T) and forwarded to Congress to support FY 1995 budget deliberations.</p> <p>The UUV Program Plan establishes a clandestine, near-term mine reconnaissance capability as the Navy's top UUV priority; a long term-mine reconnaissance system as priority two; the conduct of surveillance, intelligence and tactical oceanography missions as priority three; and exploring advanced UUV designs for the future as priority four. FY 1995 Congressional language complimented the Navy Plan and fully supported priorities one and two starting in FY 1995.</p> <p>The UUV project funds development of the first three priorities of the UUV Program Plan. The Near-Term Mine Reconnaissance System (NMRS) is a minehunting UUV system launched and recovered from an SSN-688 class submarine capable of mine detection, classification, and localization. One NMRS Operational Prototype (OP) system was made available to the Commander Submarine Development Squadron-Five in FY 1999. No further production of the NMRS is planned. Since the NMRS is viewed as a stop-gap capability with a life expectancy of approximately 6 years, the AN/BLQ-11 Long-Term Mine Reconnaissance System (LMRS) is being developed to provide a robust, long-term Fleet capability to conduct clandestine minefield reconnaissance. Several Long-Term Mine Reconnaissance Systems will be procured beginning in FY 2003. The Navy's third priority is the conduct of surveillance, intelligence and tactical oceanography. To meet this requirement the Navy will develop a Multi-Mission UUV (MMUUV) system that is capable of performing different missions. It is envisioned that this system will use the same vehicle energy section and structure of the LMRS, but will have payload sensors appropriate to meet various mission requirements.</p> <p>The Near-Term Mine Reconnaissance System (NMRS) program has developed and tested one operational prototype system. The NMRS was made available to the Fleet and will remain available for Fleet use until delivery of the first LMRS. In accordance with N87 letters Ser N87/9U657190 of 26 July 1999 and Ser N87/9U657196 of 27 July 1999, all remaining RDT&E funding for NMRS has been applied to the LMRS program.</p> <p>The Long-Term Mine Reconnaissance System (LMRS) is currently in development. The fabrication of a prototype system will begin in FY01. This prototype system will support test and evaluation, and then in FY03 will transition to fleet operations.</p> <p>B. (U) Program Change Summary: (show total funding, schedule, and technical changes for the program element that have occurred since the last submission).</p> <p>Funding:</p> <p>FY99 reductions reflect: -.050 for Sec. 8108 Revised Economic, -.010 for Civilian Personnel, -.308 for Sec. 8054 Contract Advisory, -.099 for Inflation Savings, -.508 for SBIR/STTR Transfer, -.085 for BSO 1002 Actual Update Nov99, -.003 for FY1999 BTRs.</p> <p>FY00 reductions reflect: -.051 for SSP. FY00 increases reflect: +.051 for Restore of Issue 62288 Outsourcing, +2.300 for NMRS Program Completion.</p> <p>FY01 reductions of -.390 are for congressional undistributed reductions. FY01 increases reflect: +.327 for Restore of Issue 62288 Outsourcing, +.115 for NWCF Rates, +2.100 for Reduction of NMRS O&MN funding, +.008 for PBD411 ICC, +.004 for PBD604 Mil/Civ Pay Rates</p> <p>Schedule:</p> <p>MMUUV moved out one year because \$2.300 was transferred into LMRS for completion of LMRS R&D.</p> <p>Technical:</p> <p>No technical program changes.</p>										

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Exhibit R-2, RDT&E Budget Item Justification
(Exhibit R-2, page 26 of 31)

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EXHIBIT R-2a, RDT&E Project Justification							DATE:			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4		PROGRAM ELEMENT NAME AND NUMBER			PROJECT NAME AND NUMBER					
		Surface and Shallow Water Mine Countermeasures			Unmanned Undersea Vehicle V2094					
		Program Element (PE) 0603502N								
COST (\$ in Millions)		FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Project Cost		20.703	29.225	26.138	24.000	17.219	11.269	10.946	CONT.	CONT.
RDT&E Articles Qty		1 - NMRS				1 - LMRS				

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1999 Accomplishments:

(U) (6.106) Priority 1 (NMRS): Conducted Interim Training (in water) and SSN Testing. Completed preparations for fleet availability of the Prototype System. Turned system over to COMSUBDEVRON FIVE.

(U) (14.597) Priority 2 (LMRS): Completed LMRS Detailed Design and conducted the LMRS Critical Design Review. Commenced preparations for award of the LMRS Development Phase contract. Conducted product development risk mitigation testing.

1. (U) FY 2000 Plan:

(U) (29.225) (LMRS): Award development contract and begin development phase.

1. (U) FY 2001 Plan:

(U) (26.138) (LMRS): Continue development phase and begin fabrication of prototype system.

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Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 27 of 31)

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2000	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4	PROGRAM ELEMENT NAME AND NUMBER Surface and Shallow Water Mine Countermeasures Program Element (PE) 0603502N				PROJECT NAME AND NUMBER Unmanned Undersea Vehicle V2094			

B. Other Program Funding Summary:

	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 To Complete	Total Cost
OPN PE 0204281N; Line Item 217100	0.0	0.0	0.0	0.0	25.0	52.6	48.4 CONT.	CONT.
OMN PE 0204281N 1B2B (LMRS)	0.0	0.0	0.0	0.0	0.7	5.7	6.4 CONT.	CONT.
1D3D (NMRS)	0.0	0.0	0.0	0.0	0.0	0.0	0.0 CONT.	CONT.

NMRS O&MN funding has been realigned to LMRS RDT&E,N funding in accordance with N87 letters Ser N87/9U657190 of 26 July 1999 and Ser N87/9U657196 of 27 July 1999.

C. Acquisition Strategy: One Operational Prototype NMRS has been procured via sole source contract. No further NMRS production is planned. The LMRS acquisition strategy is structured to maximize competition during system development. In FY97 three one year contracts were awarded for development of preliminary design. In early FY98, two of the preliminary design contractors were selected to continue development through a critical design review. Selection of these two contractors was based primarily on the contractor's performance during the preliminary design contract. In early FY00, Boeing was selected to complete the LMRS design, fabricate a prototype system and support in-water testing. Procurement of the LMRS will be sole source to Boeing. A competitive procurement is not cost effective due to the limited (6-12) number of systems planned for procurement.

The MMUUV project will use competitive procurement to award an RDT&E contract for the development and prototyping of the system. Procurement and operation is not planned within the FYDP.

D. Schedule Profile: See next page.

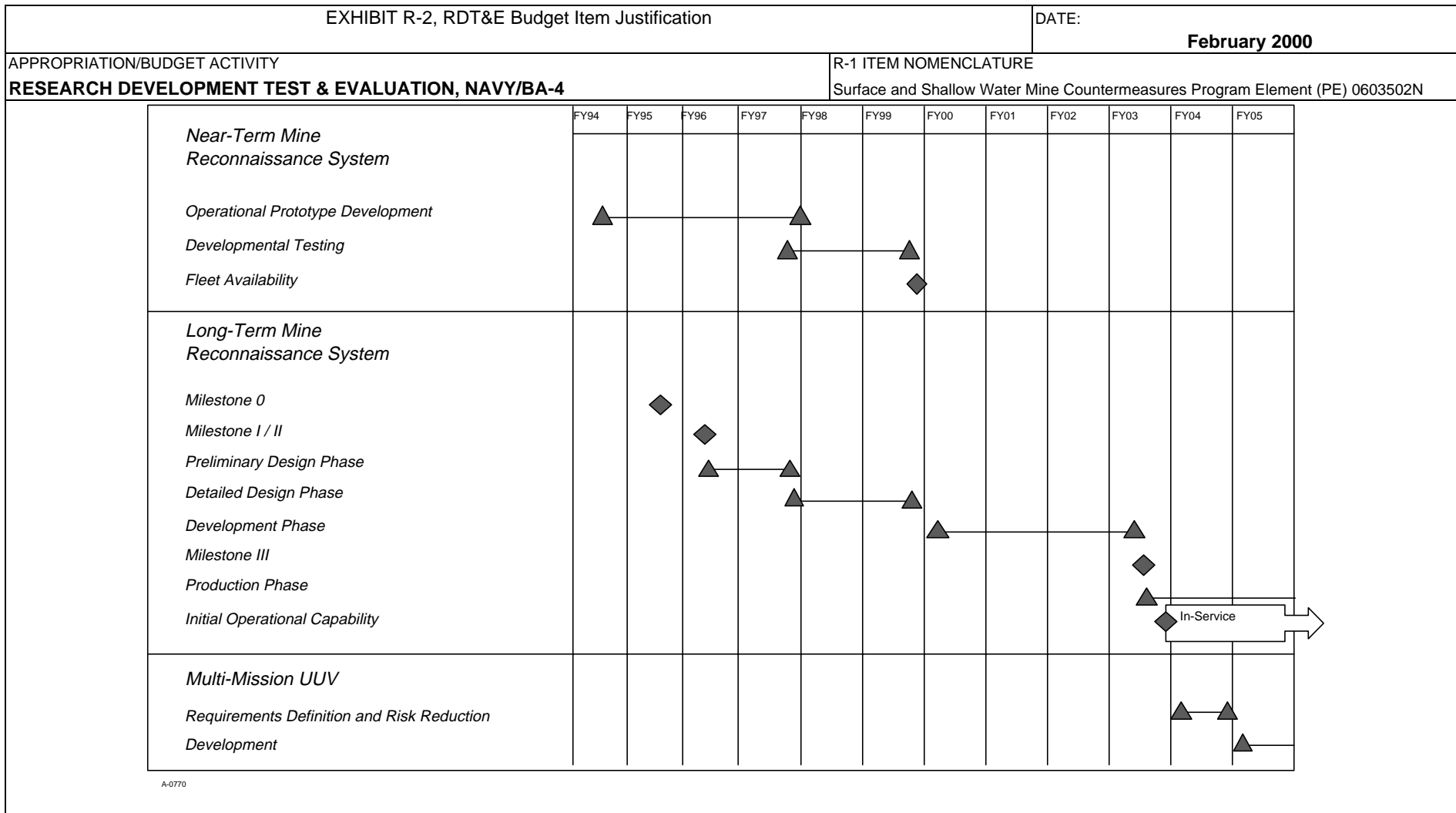
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Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 28 of 31)

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Exhibit R-2, RDT&E Budget Item Justification
(Exhibit R-2, page 29 of 31)

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Exhibit R-3 Cost Analysis (page 1)							DATE: February 2000					
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4			PROGRAM ELEMENT Surface and Shallow Water Mine Countermeasures Program Element (PE) 0603502N			PROJECT NAME AND NUMBER Unmanned Undersea Vehicle V2094						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development (NMRS)	SS/CPAF	NGC	44.554	1.269	N/A					0.000	45.823	
Award Fees (NMRS)			3.047	0.669	N/A					0.000	3.716	
System Maintenance (NMRS)	SS/CP	NGC	1.987	1.837	N/A					0.000	3.824	
Primary Hardware Development (LMRS)												
Detailed Design Contract	CPAF	NGC and Boeing North America	19.876	10.109	N/A					0.000	29.985	
Award Fees (LMRS Design)			0.575	0.266	N/A					0.000	CONT.	
Primary Hardware Development (LMRS)												
Development Contract	CPAF	Boeing				23.588	11/99	20.226	N/A	CONT.	CONT.	
Award Fees (LMRS Development)						1.539	N/A	1.168	N/A	CONT.	CONT.	
Gov't Facilities Costs (LMRS Development)						0.848	N/A	1.444	N/A	CONT.	CONT.	
Ancillary Hardware Development												
System Engineering												
Licenses												
Tooling												
Subtotal Product Development			70.039	14.150		25.975		22.838		CONT.	CONT.	
Remarks:												
Development Support Equipment												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Engineering Technical Services												
Technical Data												
GFE												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

R-1 SHOPPING LIST - Item No. 35

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 30 of 31)

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CLASSIFICATION:

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2000				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
			Surface and Shallow Water Mine Countermeasures			Unmanned Undersea Vehicle V2094						
RDT&E, N/BA-4			Program Element (PE) 0603502N									
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	Various						0.225		CONT.	CONT.	
Operational Test & Evaluation												
Tooling												
GFE												
Subtotal T&E			0.000	0.000		0.000		0.225		CONT.	CONT.	
Remarks:												
Contractor Engineering Support	CPAF	JHU/APL, ARL/UT, SGT, Drape	4.808	1.357	N/A*	0.000	N/A	0.350	N/A*	CONT.	CONT.	
Government Engineering Support	WR	Various	10.621	4.262	N/A	2.841	N/A	2.185	N/A	CONT.	CONT.	
Program Management Support	Various	Various	2.460	0.875	N/A	0.363	N/A	0.500	N/A	CONT.	CONT.	
Program Management Personnel												
Travel				0.059	N/A	0.046	N/A	0.040	N/A	CONT.	CONT.	
Labor (Research Personnel)												
Overhead												
Subtotal Management			17.889	6.553		3.250		3.075		CONT.	CONT.	
Remarks: * Multi-year contracts incrementally funded; therefore; Award Date is N/A.												
Total Cost			87.928	20.703		29.225		26.138		CONT.	CONT.	
Remarks:												

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